Acute Iliofemoral DVT In Young Patients: Should They Undergo Stenting For Iliac Compression At The Time Of DVT Intervention

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Disclosures

- Sonovascular Consultant
- Intervene Consultant and Research support

Acute ilio-fem DVT in 17 YO female

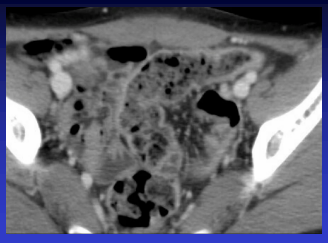
- 17 yo female acute IFDVT left
  - Oral contraceptives
  - 1/2ppd cigarette
- Severe pain
- Moderate/severe edema

Case

- Continued obstruction after thrombectomy and venoplasty
- Family declined stent insertion

Treated with
- anticoagulation
- Smoking cessation
- Alternate contraception

- 4 months later
- Asymptomatic
- Need for long-term anticoagulation?



Current treatment of young patients with IFDVT

- 49 patients aged 9-24 at 4 hospitals
- Treated by different specialists both for hospital care and intervention

- Treatment
  - Anticoagulation alone n = 13
  - TPA/mech thrombect alone n = 5
  - TPA/thrombect + plasty n = 17
  - TPA/thrombect + stent n = 14

Lack of consensus across specialties on optimal treatment

- Small single center study
- Patients with proximal DVT underwent pharmacomech thrombectomy
- If iliac vein stenosis >50% identified, randomized to stent or no stent
- Outcome vein patency and QOL at 1 year

Stent randomization – 1 yr outcomes

- Patency of proximal outflow
  - 74.1% with stent
  - 46.6% no stent
- QOL outcomes
- VCSS significantly lower in group treated with stents
- **Adverse events in 2 groups not reported**

Long term risks of stent implantation

- Stent rethrombosis
- In-stent stenosis
- Contralateral vein thrombosis
- Chronic pelvic pain
- Migration, stent erosion, AV fistula
- What is long term?

CLINICAL RESEARCH STUDIES

From the American Venous Forum

Deep venous thrombosis associated with caval extension of iliac stents

Erin H. Murphy, MD, Blake Johns, BS, Elliot Varney, BS, William Buck, BBA, MS, Arjun Jayaraj, MD, MPH, RPVI, *and* Seshadri Raju, MD, FACS, *Jackson, Miss*

- 10% of patients treated with Wallstent dev contralat thrombosis by Kaplan-Meier lifetable
- Median time of contralateral thrombosis **48 months**

JVS ven lymphat disord 2017;5:8-17

An overview of in-stent restenosis in iliofemoral venous stents

Taimur Saleem, MBBS, FACS, *and* Seshadri Raju, MD, FACS, *Jackson, Miss*

- ISR occurs in 5-15% after venous stenting
  - Higher in cases after acute DVT and PTS cases
  - Correlated to poor venous inflow
  - Increased with incomplete treatment

J Vasc Surg Venous Lymphat Disord 2022;10:492-503.

Improvement following restoration of inline flow argues against comprehensive thrombus removal strategies and for selective stenting in acute symptomatic iliofemoral venous thrombosis

Arjun Jayaraj, MD, Michael Lucas, BS, Robert Fuller, BS, Thomas Powell, MS, *and* Riley Kuykendall, MS, *Jackson, MS*

- After PMT for proximal DVT, evaluated outflow tract with IVUS
- Performed stent when severe obstruction that limited outflow
  - Did not stent for partial obstruction or residual thrombus if in-line flow re-established
  - If symptoms did not improve significantly or recurrent thrombosis , did delayed stenting

https://doi.org/10.1016/j.jvsv.2022.06.017

Jayaraj et al, results

Stent utilization
- at initial procedure 33%
- Delayed stenting 14%

QOL outcomes
- VCSS
  - improved from 6 to 2
- CIVIQ 20
  - Improved from 38 to 22

- **Author recommendations**
- PCT to re-establish inline flow
  - This results in symptom improvement
- Employ stents selectively if needed to get in-line flow

Normal anatomy of left iliac vein in teenagers

- 70 patients aged 14-21
- CT abd/pelvis for non-venous diagnosis
- Measured % compression of iliac veins within pelvis
- Compared to normal iliac vein size in non-compressed area

- Left iliac compression >50%
  - **88% of patients**
- Left iliac compression > 70%
  - **54% of patients**

So should we routinely use stents in young pts with IFDVT?

- ???
- Normal state is narrowing of LCIV
- IFDVT induces transient inflammation increasing compression/obstruction in acute DVT that may resolve over time??

- **Gap in knowledge in need of additional research/experience**